No. 200500006

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Texas Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Tamcot 22'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this nineteenth day of September, in the year two thousand and five.

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions* — Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME	3. VARIETY NAME
Texas Agricultural Experiment Station	TAM 96WD-22	Tamcot 22

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*	5. TELEPHONE *(include area code)*	FOR OFFICIAL USE ONLY
Dr. Mark A. Hussey Associate Director, Texas Agricultural Exp. Station 2147 TAMU College Station, TX 77843-2147	979-845-4747 6. FAX *(include area code)* 979-458-4765	PVPO NUMBER: 200500006 FILING DATE: OCTOBER 7, 2004

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*	8. IF INCORPORATED, GIVE STATE OF INCORPORATION	9. DATE OF INCORPORATION
State of Texas research Agency		

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Janie Hurley
Technology Licensing Associate, Agriculture/Life Sciences
Technology Licensing Office
The Texas A&M University System
3369 TAMU
College Station, TX 77843-3369

FEES RECEIVED
FILING AND EXAMINATION FEES: $ 3,652.00 DATE 10/07/2004
CERTIFICATION FEE: $ 682.00 DATE 8/24/05

11. TELEPHONE *(include area code)*	12. FAX *(include area code)*	13. E-MAIL
(979) 847-8682	979-845-1402	jhurley@tamu.edu

14. CROP KIND *(Common Name)*	16. FAMILY NAME *(Botanical)*
Cotton	Malvaceae
15. GENUS AND SPECIES NAME OF CROP	17. IS THE VARIETY A FIRST GENERATION HYBRID?
Gossypium malvacearum	☐ YES ☑ NO

18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (***OPTIONAL***)
☐ YES ☑ NO
IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERICALIZATION. _____

19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)
- a. ☑ Exhibit A. Origin and Breeding History of the Variety
- b. ☑ Exhibit B. Statement of Distinctness
- c. ☑ Exhibit C. Objective Description of Variety
- d. ☑ Exhibit D. Additional Description of the Variety *(Optional)*
- e. ☑ Exhibit E. Statement of the Basis of the Owner's Ownership
- f. ☑ Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
- g. ☑ Filing and Examination Fee ($3,652), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *(See Section 83(a) of the Plant Variety Protection Act)*
☑ YES *(If "yes", answer items 21 and 22 below)* ☐ NO *(If "no", go to item 23)*

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES?
☑ YES ☐ NO
IF YES, WHICH CLASSES? ☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED

22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?
☑ YES ☐ NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☒ FOUNDATION ☐ REGISTERED ☒ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
☐ YES ☑ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES ☑ NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER	SIGNATURE OF OWNER
NAME *(Please print or type)*: Mark A. Hussey	NAME *(Please print or type)*:
CAPACITY OR TITLE: Associate Director, TAES	DATE: 9/21/2004
CAPACITY OR TITLE:	DATE:

(See reverse for instructions and information collection burden statement)

ST-470 (04-03) designed by the Plant Variety Protection Office using Word 2002.

200500006

Tamcot 22

Exhibit A. Origin and Breeding History

1. Genealogy

The parents used in developing Tamcot 22 (experimental designation 96WD-22)were breeding lines developed at the Cotton Improvement Laboratory of the Texas Agricultural Experiment Station (TAES) at College Station, Texas. Tamcot 22 was derived by hybridization and pedigree selection at Weslaco, Texas. Tamcot 22 resulted from the cross between TAM $87G^3$-27 breeding line developed in the CIL program and 88 G-104 (Texas 418) (Smith, 2001), a high yielding picker-type upland cotton with resistance to silverleaf whitefly, *Bemesia argentifolii.* Tamcot 22 was derived from a single $F_{2:3}$ plant selected on the basis of its apparent yield potential, fiber properties based on HVI testing and overall plant conformation. Tamcot 22 has been treated subsequently as a pure line and evaluated throughout central, south and north Texas for three years (2000 – 2002).

2. Selection and Testing Procedures

Tamcot 22 was tested extensively throughout Texas and in the mid-South, and was selected for drought tolerance, agronomic characteristics, earliness, yield potential, and fiber quality characteristics. Field evaluations were conducted over 5 yr (1998–2002) at three to eight locations in Texas (Weslaco, Corpus Christi, San Patricio County, Uvalde, College Station, Thrall, Dallas, and Chillicothe) for yield, lint fraction, and fiber. Seed increases of the germplasm lines and checks were rogued for off-types and hand harvested at College Station and Weslaco for further testing.

3. Variants

Tamcot WD22 is an all plant parts hairy (pubescent) cultivar, however, 0.1% of the plants may have no hairs (glabrous) on the stem. It has normal shaped leaves, but 0.007% of the plants may have okra leaves; and all plant parts are green but 0.001% of the plants may have red plant color.

4. Uniformity and Stability

In five years of performance testing at six locations throughout Texas and in Breeder and Foundation seed blocks, Tamcot 22 has been very uniform and stable for plant, leaf, flower, bract, and boll characteristics as described, and for frequency of variants given above. Tamcot 22 is uniform, widely adapted and shows genotypic stability for total lint yield, fiber quality traits, and in agronomic characteristics, in comparison with reference cultivars under different environmental and production conditions. Tamcot 22 is phenotypically homogenous and stable.

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Exhibit B: Statement of Distinctness

Tamcot 22 is most similar to Texas 418 and Deltapine 50. Tamcot 22 has a higher gin turnout 40.0%, compared with 38.4% for Texas 418 and 35.0% for Deltapine 50. Tamcot 22 is a pubescent cultivar and Texas 418 is a glabrous cultivar. Tamcot 22 has 32 seeds per boll compared with 30 for Texas 418. Mature bracts of Tamcot 22 are similar to Deltapine 50 in size (length and width) but smaller than Tamcot Sphinx. Tamcot 22 has similar number of teeth/bract as Deltapine 50 but have more teeth/bract than Tamcot Sphinx.

Table 1. Agronomic performance of preliminary strains (50 entry test) evaluated in 1998.

Weslaco

Cultivar	Lint Yield (lb/a)	Rank	Gin Turnout (%)	Micro naire (units)	Length (in)	Strength (g/tex)	Uniformity (ratio)	Elongation (%)
Tamcot 22	**1468**	**5**	**40.3**	**4.1**	**1.08**	**26.4**	**79**	**5.6**
Tamcot Sphinx	1282	28	37.1	4.7	1.05	27.9	82	5.0
Sure-Grow 125	1389	9	37.8	4.9	1.09	25.7	82	5.5
Deltapine 50	1296	25	35.1	4.5	1.10	26	82	5.3
LSD (k=100)[1]	235		2.5	0.7	0.04	2.7	1.5	0.5
%CV	11.9		3.5	6.6	1.90	4.7	0.8	4.5
Test Mean	1284		35.7	4.3	1.09	28.5	82	5.6

Corpus Christi

	Lint Yield (lb/a)	Rank	Gin Turnout (%)	Micro naire (units)	Length (in)	Strength (g/tex)	Uniformity (ratio)	Elongation (%)
Tamcot 22	**524**	**1**	**42.2**	**4.2**	**0.98**	**27.4**	**81**	**6.4**
Tamcot Sphinx	405	17	36.8	4.7	0.97	27.2	82	5.5
Sure-Grow 125	402	20	38.7	4.8	0.97	25	82	6.7
Deltapine 50	407	16	35.7	4.5	1.02	25.9	82	6.7
LSD (k=100)[1]	98		3.0	0.4	0.04	1.9	2	0.5
%CV	15.1		4.0	4.7	1.90	3.5	1	4.1
Test Mean	387		37	4.2	1.0	28.30	81	6.1

[1] Values within columns are different at approximately p-0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 2. Agronomic performance of advanced strains (26 entry test) evaluated in 1999.

Weslaco

Cultivar	Lint Yield (lb/a)	Rank	Gin Turnout (%)	Micro naire (units)	Length (in)	Strength (g/tex)	Uniformity (ratio)	Elongation (%)
Tamcot 22	**1288**	**1**	**41.9**	**4.4**	**1.12**	**27.2**	**84**	**6.5**
Tamcot Sphinx	1054	9	35.3	4.5	1.10	31.1	83	6.0
Sure-Grow 125	1053	10	39.1	5.0	1.09	25.3	85	6.6
Deltapine 50	1019	12	34.0	4.9	1.12	26.6	85	6.6
LSD (k=100)[1]	132		1.8	0.4	0.20	2.9	1.9	ns
%CV	9.1		2.4	4.4	1.10	4.3	0.9	4.7
Test Mean	1012		36.7	4.6	1.13	29	84	6.3

Corpus Christi

Cultivar	Lint Yield (lb/a)	Rank	Gin Turnout (%)	Micro naire (units)	Length (in)	Strength (g/tex)	Uniformity (ratio)	Elongation (%)
Tamcot 22	**1201**	**1**	**39.6**	**4.3**	**1.12**	**26.6**	**83**	**6.8**
Tamcot Sphinx	729	20	37.0	5.3	1.05	28.6	84	6.2
Sure-Grow 125	792	11	37.8	5.0	1.08	24.6	83	7.0
Deltapine 50	905	6	35.0	4.8	1.10	25.5	83	6.9
LSD (k=100)[1]	131		1.3	0.3	0.04	1.7	2	0.5
%CV	12.2		1.9	3.7	2.00	3.2	1	3.5
Test Mean	798		35.9	4.6	1.10	27.6	83	6.6

College Station

Cultivar	Lint Yield (lb/a)	Rank	Gin Turnout (%)	Micro naire (units)	Length (in)	Strength (g/tex)	Uniformity (ratio)	Elongation (%)
Tamcot 22	**1161**	**8**	**38.2**	**4.3**	**1.13**	**28.8**	**83**	**6.6**
Tamcot Sphinx	1148	9	35.7	4.6	1.15	30.6	84	5.8
Sure-Grow 125	1025	19	37.5	4.6	1.15	25.9	85	6.4
Deltapine 50	1072	15	35.6	4.1	1.20	27.8	84	6.5
LSD (k=100)[1]	372		ns	ns	ns	ns	ns	ns
%CV	16.9		4.7	9.0	3.60	10	1.2	5.7
Test Mean	1070		35.5	4.1	1.14	29.1	84	6.4

[1] Values within columns are different at approximately p-0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 3. Agronomic performance of and fiber quality of strains (28 entry test) evaluated during 1998 and 1999.

Weslaco

Cultivar	Lint Yield	Rank	Gin Turnout	Micro naire	Length	Strength	Uniformity	Elongation
	(lb/a)		(%)	(units)	(in)	(g/tex)	(ratio)	(%)
Tamcot 22	**1348**	**2**	**41.1**	**4.3**	**1.10**	**26.8**	**82**	**5.8**
Tamcot Sphinx	1168	16	36.2	4.6	1.08	29.5	83	6.1
Sure-Grow 125	1221	7	38.5	5.0	1.09	25.5	84	6.4
Deltapine 50	1158	17	34.6	4.7	1.11	26.3	84	6.1
LSD (k=100)[1]	133.6		1.7	0.6	0.04	3.2	2	ns
%CV	5.2		2.3	5.2	1.90	4.8	0.9	4.5
Test Mean	1172		36.6	4.4	1.12	29.1	83	6

Corpus Christi

Cultivar	Lint Yield	Rank	Gin Turnout	Micro naire	Length	Strength	Uniformity	Elongation
	(lb/a)		(%)	(units)	(in)	(g/tex)	(ratio)	(%)
Tamcot 22	**863**	**1**	**40.9**	**4.3**	**1.05**	**27**	**82**	**6.5**
Tamcot Sphinx	567	18	36.9	5.0	1.01	27.9	83	5.9
Sure-Grow 125	597	13	38.3	5.0	1.03	24.8	83	6.9
Deltapine 50	656	6	35.4	4.7	1.06	25.7	83	6.8
LSD (k=100)[1]	ns		1.7	0.3	0.03	1.8	1.4	0.4
%CV	15		2.4	4.0	1.60	3.2	0.7	2.9
Test Mean	600		36.7	47.4	1.05	28.4	82.4	6.4

[1] Values within columns are different at approximately p-0.05 (k=100) if they differ by more than the LSD at the base of the column.

Table 4. Lint yield, gin turnout and fiber quality traits for 96WD-69s, 96WD-18 and 96 WD-22 with comparison checks in 2000 Elite Strains Tests.

Weslaco

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**1408**	**39.5**	**4.3**	**1.13**	**25.6**	**82.0**	**5.9**
96 WD-18	1338	37.8	4.3	1.21	29.8	84.0	6.1
96 WD-69s	1297	36.9	4.4	1.14	26.4	81.0	6.6
Deltapine 50	1185	34.8	4.9	1.12	25.6	84.0	6.0
Sure-Grow 125	1113	37.4	4.7	1.14	25.0	84.0	6.2
Tamcot Sphinx	1080	36.6	4.6	1.11	27.0	83.0	4.8
LSD (k=100)[1]	130	1.1	0.3	0.05	3.1	ns	1.1
% CV	8.2	1.5	3.4	2.00	4.6	1.5	8.3
Mean	1174	36.7	4.4	1.15	27.3	83.0	5.7

Corpus Christi

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**991**	**38.7**	**3.2**	**1.09**	**25.8**	**82.0**	**5.9**
96 WD-18	925	37.7	3.7	1.18	29.4	84.0	6.4
96 WD-69s	847	36.0	3.8	1.08	27.2	81.0	5.8
Tamcot Sphinx	817	36.6	4.2	1.11	28.5	84.0	5.2
Deltapine 50	740	35.7	4.2	1.08	25.4	83.0	5.5
Sure-Grow 125	736	37.7	4.2	1.07	24.6	83.0	6.0
LSD (k=100)[1]	132	1.3	0.4	0.03	1.5	ns	0.6
% CV	10.7	1.7	5.3	1.50	2.7	1.1	4.7
Mean	804	36.8	3.7	1.11	27.7	83.0	5.7

Uvalde

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**832**	**37.6**	**3.3**	**1.16**	**26.1**	**82.0**	**6.2**
96 WD-69s	740	33.6	3.6	1.11	25.2	81.0	5.6
Sure-Grow 125	729	35.6	3.4	1.18	25.2	82.0	7.3
96 WD-18	718	34.5	3.0	1.23	28.9	84.0	6.6
Tamcot Sphinx	697	35.0	3.7	1.13	25.8	82.0	5.4
Deltapine 50	658	31.5	3.3	1.11	24.8	81.0	5.8
LSD (k=100)[1]	130	1.1	0.7	0.05	2.1	ns	1.0
% CV	11.5	1.6	7.6	1.90	3.6	1.4	6.9
Mean	687	34.2	3.3	1.15	26.8	82.0	5.8

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Table 4 con't. 2000 Elite Strains Test.

College Station

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
96 WD-69s	810	36.3	4.7	1.15	30.3	83.0	6.4
Tamcot Sphinx	768	36.1	4.4	1.17	31.5	85.0	5.7
Deltapine 50	760	35.3	5.1	1.13	27.8	84.0	5.0
Sure-Grow 125	737	37.6	4.6	1.16	28.0	84.0	5.9
96 WD-18	713	35.3	4.1	1.25	32.4	84.0	6.0
Tamcot 22	**686**	**34.0**	**4.0**	**1.20**	**31.2**	**83.0**	**5.9**
LSD (k=100)[1]	ns	ns	0.4	0.06	1.8	ns	4.1
% CV	8.6	6.1	4.5	2.20	2.8	1.4	7.4
Mean	747	35.8	4.3	1.18	30.5	84.0	5.5

Thrall

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**539**	**39.5**	**3.7**	**1.05**	**25.2**	**81.0**	**5.6**
96 WD-69s	491	34.8	3.5	1.07	28.8	83.0	6.0
Deltapine 50	476	33.6	3.6	1.06	24.2	84.0	5.5
Tamcot Sphinx	446	35.5	3.3	1.03	25.8	83.0	5.2
96 WD-18	433	35.7	3.3	1.14	29.2	84.0	5.7
Sure-Grow 125	422	37.0	3.7	1.06	25.9	85.0	5.5
LSD (k=100)[1]	93	1.5	0.4	0.05	2.6	1.8	ns
% CV	14.1	2.2	4.9	2.10	4.2	1.0	6.4
Mean	433	35.9	3.5	1.08	26.9	82.0	5.2

Dallas

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
96 WD-69s	449	28.3	4.0	1.08	27.7	80.0	4.8
Deltapine 50	418	28.2	4.5	1.11	25.9	83.0	4.9
Tamcot 22	**416**	**32.0**	**3.5**	**1.08**	**24.2**	**80.0**	**5.0**
Tamcot Sphinx	410	29.8	4.0	1.05	27.8	83.0	4.9
Sure-Grow 125	392	31.1	4.1	1.06	25.4	82.0	5.3
96 WD-18	352	27.1	3.5	1.15	30.1	83.0	5.3
LSD (k=100)[1]	38	2.3	0.3	0.05	2.5	2.3	ns
% CV	7.6	3.8	4.4	2.30	4.3	1.1	4.9
Mean	366	28.3	3.8	1.09	27.1	81.0	4.9

Table 4 con't. 2000 Elite Strains Test.

Chillicothe

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**723**	**30.5**	**4.0**	**1.11**	**26.9**	**81.0**	**5.9**
96 WD-69s	669	26.7	4.6	1.07	28.7	82.0	6.2
96 WD-18	663	28.5	4.6	1.14	30.4	81.0	6.1
Sure-Grow 125	634	28.1	4.6	1.07	26.9	81.0	5.8
Tamcot Sphinx	586	27.9	4.9	1.10	30.0	82.0	5.2
Deltapine 50	531	25.4	4.1	1.07	26.1	80.0	6.2
LSD (k=100)[1]	83	2.6	0.5	0.07	2.4	ns	0.8
% CV	10.5	4.3	5.7	2.70	3.7	1.2	5.4
Mean	584	26.5	4.1	1.10	28.8	81.0	5.6

Exhibit C: Attached

Botanical and Objective Description Summary

1. Botanical Description

Family: Malvaceae

Genus: *Gossypium*

Species: *hirsutum*

Kind: Upland Cotton

2. Objective Description

Tamcot 22 is a mid to full season, picker-type upland cotton with a growth habit similar to Deltapine 50 when grown with supplemental irrigation at College Station. Leaf pubescence ranges from 7 to 72 trichomes/cm^{-2}. It possesses normal leaves and bract types, and is glanded and nectaried. Flowers from plants of Tamcot 22 have cream-colored petals and anthers/pollen. Full-size green bolls are longer than their width and are broader in the middle. Bolls have four locks with five occasionally. Open bolls resist shattering, i.e. storm resistant, but are not stormproof and are suitable for picker harvesting. Plants are of medium height, similar to Deltapine 50 and taller (4 cm) than Tamcot Sphinx.

REPRODUCE LOCALLY. Include form number and date on all reproductions.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

Exhibit C

OBJECTIVE DESCRIPTION OF VARIETY
Cotton (*Gossypium* spp.)

NAME OF APPLICANT (S)	TEMPORARY OR EXPERIMENTAL DESIGNATION	VARIETY NAME
The Texas Agricultural Experiment Station Texas A&M University	TAM 96WD-22	Tamcot 22

ADDRESS (*Street and No. or RD No., City, State, Zip Code and Country*)	FOR OFFICIAL USE ONLY PVPO NUMBER
2474 TAMUS Department of Soil & Crop Sciences Texas A&M University College Station, TX 77843-2474	200500006

Place the appropriate data that describes the varietal characteristics of this variety in the space provided. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Data for quantitative plant characters should be based on a minimum of 100 plants. Royal Horticultural Society or any recognized color chart may be used to determine plant colors.

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties that are adapted to your area. One of the comparison varieties must be the most similar variety (MSV) used in Exhibit B.

MSV 1. Texas 418 Variety 2. Deltapine 50 Variety 3. TamcotSphinx

1. SPECIES:

X *G. hirsutum* L. ____ *G. barbadense* L.

2. AREA(S) OF ADAPTATION (A = Adapted, NA = Not Adapted, NT = Not Tested):

NT Eastern	A Delta	A Central	A Blacklands
NA Plains	A Western	NT Arizona	NA San Joaquin

____ Other (Specify): ____

3. GENERAL: General Plant Type

	Application Variety	MSV 1	Comparison Variety 2	Comparison Variety 3
Plant Habit: Spreading, Intermediate, Compact	Intermediate	Intermediate	Spreading	Compact
Foliage: Sparse, Intermediate, Dense	Intermediate	Intermediate	Intermediate	Intermediate
Stem Lodging: Lodging, Intermediate, Erect	Intermediate	Intermediate	Intermediate	Intermediate
Fruiting Branch: Clustered, Short, Normal	Normal	Normal	Normal	Short
Growth: Determinate, Intermediate, Indeterminate	Indeterminate	Indeterminate	Intermediate	Determinate

3. GENERAL: (continued)

	Application Variety	MSV 1	Comparison Variety 2	Comparison Variety 3
Leaf Color: Greenish yellow, Light green, Medium green, Dark green	Medium green	Medium green	Medium green	Light Green
Boll Shape: Length less than width, Length equal to width, Length more than width	Length>width	Length>width	Length>width	Length>width
Boll Breadth: Broadest at base, Broadest at middle	Middle	Middle	Middle	Base

4. MATURITY: (50% Open bolls; Preferred method; Describe method if different method was used)

Date of 50% open bolls:	130	136	129	126

5. PLANT:

cm to 1st Fruiting Branch: (from cotyledonary node)	20	26	20	21
No. of Nodes to 1st Fruiting Branch: (excluding cotyledonary node)	7	9	7	7
Mature Plant Height cm: (from cotyledonary node to terminal	91	115	95	87

6. LEAF: (Upper most fully expanded leaf)

Type: Normal, Sub Okra, Okra, Super Okra	Medium green	Medium green	Medium green	Light Green
Pubescence: Absent, Sparse, Medium, Dense **OR** Trichomes/cm^2 (Bottom surface excluding veins	33	2	12	26
Nectaries: Present or Absent	Present	Present	Present	

7. STEM PUBESCENCE:

Glabrous, Intermediate, Hairy	Intermediate	Intermediate	Intermediate	Intermediate

8. GLANDS: (Gossypol) Absent, Sparse, Normal, More than Normal

Leaf:	Normal	Normal	Normal	Normal
Stem:	Normal	Normal	Normal	Normal
Calyx Lobe: (normal is absent)	Normal	Sparce (2)	Sparce (3)	More than

9. FLOWER:

Petals: Cream, Yellow	Cream	Cream	Cream	Cream
Pollen: Cream, Yellow	Cream	Cream	Cream	Cream
Petal Spot: Present, Absent	Absent	Absent	Absent	Absent

10. SEED:

Seed Index: (g/100 seeds, fuzzy basis)	10.0	9.9	9.9	10.8
Lint Index: (g lint/100 seeds)	7.1	7.7	6.3	6.9

11. BOLL:

Lint Percent:
_____ Picked _____ Pulled

OR

Gin Turnout:
X Picked _____ Stripped

	40.0	38.0	35.0	36.0
Number of Seeds per Boll	32	30	30	27.4
Grams Seed Cotton per Boll	5.1	5.7	4.9	4.9
Number of Locules per Boll	4	4	4	4
Boll Type: Stormproof, Storm Resistant, Open)	SR	SR	SR	SR

12. FIBER PROPERTIES:

Specify Method (HVI or Other): HVI

Length: (inches, 2.5% SL)	1.10	1.13	1.10	1.07
Uniformity (%):	81.8	83	84	82
Strength, T1 (g/tex)	27.2	28.2	26.9	29.4
Elongation, E1 (%)	5.7	7.3	5.6	5.8
Micronaire:	4.1	4.3	4.7	4.6
Fineness (Source _____)	167		198	190
Yarn Tenacity: (cN/tex, 27 tex)				
Yarn Strength: (lbs. 22's)				

13. DISEASES: (0 = Not Tested, 1 = Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Resistant)

0	*Alternaria macrospora*0	0	Fusarium Wilt
0	Anthracnose	1	Phymatotrichum Root Rot
0	Ascochyta Blight	0	*Pythium* (specify species)
0	Bacterial Blight (Race 1)	1	*Rhizoctonia solani*
0	Bacterial Blight (Race 2)	0	Southwestern Cotton Rust
1	Bacterial Blight (Race _____)	0	Thielaviopsis basicola
0	Diplodia Boll Rot	0	Verticillium Wilt
_____	Other (Specify) _____		

14. NEMATODES, INSECTS AND PESTS: (1 = Not Tested, 2 = Susceptible, 3 = Moderately Susceptible, 4 = Moderately Resistant, 5 = Resistant)

1 Root-Knot Nematode	1 Reniform Nematode
1 Boll Weevil	1 Grasshopper (specify species):
1 Bollworm	1 Lygus (specify species):
1 Cotton Aphid	1 Pink Bollworm
4 Cotton Fleahopper	1 Spider Mite (specify species):
1 Cotton Leafworm	1 Stink Bug (specify species):
1 Cutworm (specify species):	1 Thrips (specify species):
1 Fall Armyworm	1 Tobacco Bud Worm
Other (Specify)	

15. COMMENTS: Present any additional information that cannot adequately be described in 1 through 13, which significantly distinguished your variety.

Mature bracts are similar to Deltapine 50 in size (length and width) but have more teeth/bract. Sphinx has a similar number of teeth/bract as Deltapine 50 but its bracts are larger than either Deltapine 50 or Tamcot 22.

Exhibit D. Supporting Information

1. Lint Yield:

Tamcot 22 has excellent yield potential as indicated by its performance at multiple locations throughout Texas from 1998-2002. Tamcot 22 was compared with Deltapine 50 (Calhoun et al., 1994), Sure-Grow 125 (Calhoun et al., 1994) and Tamcot Sphinx (El-Zik and Thaxton, 1996), all popular cultivars in south and central Texas. Deltapine 50 was deleted as a comparison cultivar in 2001 and 2002, and FiberMax 832 replaced Sure-Grow 125 in 2002 because of its excellent fiber quality. The performance trials were grown with irrigation at Weslaco, College Station, Uvalde and Chillicothe, and without supplemental irrigation at Corpus Christi, Thrall, and Dallas. In 1998 Tamcot 22 was tested at Weslaco and Corpus Christi, and included College Station in 1999.

In the 1998 preliminary strains performance trial at Weslaco, Tamcot 22 averaged 1468 lb/a while Tamcot Sphinx averaged 1282 lb/a, Sure-Grow 125 1389 lb/a and Deltapine 50 1296 lb/a (not significant) (Table 1). In Corpus Christi, Tamcot 22 produced the highest ($p \leq 0.05$) lint yield, averaging 524 lb/a, compared with 405, 402, 407 lb/a for Tamcot Sphinx, Sure-Grow 125 and Deltapine 50, respectively under extreme drought conditions (Table 1).

In the 1999 advanced strains performance trials at Weslaco and Corpus Christi, Tamcot 22 ranked first at both locations, averaging 1288 lb/a and 1201 lb/a respectively, and eighth in College Station averaging 1161 lb/a (Table 2). Lint yield of Tamcot 22 was higher ($p \leq 0.05$) in Weslaco and Corpus Christi and similar in College Station to the commercial controls.

Averaged over 1998 and 1999, Tamcot 22 produced 1378 lb/a at Weslaco while Tamcot Sphinx produced 1168 lb/a, Sure-Grow 125 1221 lb/a, and Deltapine 50 1158 lb/a ($p \leq 0.05$) (Table 3). Averaged over two years in Corpus Christi, Tamcot 22 averaged 863 lb/a compared with 567, 597, and 656 lb/a for Tamcot Sphinx, Sure-Grow 125, and Deltapine 50, (not significant) respectively.

In 2000 and 2001, Tamcot 22 was tested at seven locations (Weslaco, Corpus Christi, Uvalde, College Station, Thrall, Dallas, and Chillicothe). Averaged over years and locations, Tamcot 22 produced 18% more lint ($p \leq 0.05$) than Sure-Grow 125 and FiberMax 832, and 25% more than Tamcot Sphinx. (Tables 6 and 7). Performance of Tamcot 22 at each location is shown in Tables 4, 8 and 9.

Tamcot 22 was equal or higher in lint yield production at all seven locations in 2000. Tamcot 22 produced 1408 lb/a ($p \leq 0.05$) at Weslaco, compared with 1185, 1113, 1080 lb/a for Deltapine 50, Sure-Grow 125 and Tamcot Sphinx, respectively (Table 4). The same trend was observed at Corpus Christi, Uvalde, Dallas, Thrall, and Chillicothe. Only in College Station did the comparative cultivars out perform Tamcot 22. Equivalent results were observed in 2001 and 2002 performance trials (Tables 8 and 9).

2. Fiber Quality

Fiber quality and lint percent of Tamcot 22 are included in the results of the performance trials in 1998-2002 (Tables 1-9). Tamcot 22 has a higher lint percentage than the comparison cultivars. Averaged over 1998 and 1999 in Weslaco, lint percent was 41.1% for Tamcot 22 compared with 36.2, 38.5, 34.6% for Tamcot Sphinx, Sure-Grow 125 and Deltapine 50, respectively (Table 3). Similar results occurred in Corpus Christi. Lint percent of Tamcot 22 averaged 38.2% compared with 36.6% for Sure-Grow 125 and 35.7% for Tamcot Sphinx across locations in 2000 and 2001 (Table 6). Averaged over 2001 and 2002, Tamcot 22 averaged 40.0% lint percent, FiberMax 832 averaged 37.4% and Tamcot Sphinx 37.1% (Table 7). Tamcot 22 had the highest numerical lint percent in 16 of 24 performance trials, and was second only to Stoneville 474 in the other 8 trials (Tables 4, 8 and 9).

Tamcot 22 produced fibers that were longer than Sure-Grow 125, similar to Tamcot Sphinx, but were shorter than FiberMax 832 (Tables 1 and 2). In only six of 24 performance trials represented in Tables 4, 8 and 9 did UHM length of Tamcot 22 drop below 1.09 in., the minimum standard. Tamcot 22 averaged 1.13 in. across the four irrigated trials reported in Tables 4, 8 and 9, while Tamcot Sphinx averaged 1.09 in (ns) and FiberMax averaged 1.19 in. ($p=0.05$). The average UHM of Tamcot 22 across the six dryland trials represented in Tables 4, 7 and 8 was 1.09 in., while Sphinx averaged 1.06 in. (ns) and FiberMax averaged 1.15 in. ($p=0.05$). FiberMax 832 and Sure-Grow 125 have stronger fiber bundle strength than Tamcot 22, but Tamcot 22 is equal to Tamcot Sphinx. Tamcot 22 averaged 4.0 and 4.2 micronaire across multiple years and locations, which compared with 4.6 for Sure-Grow 125, 4.4 for FiberMax 832, and 4.5 and 4.8 for Tamcot Sphinx (Tables 6 and 7). Lower micronaire within the base range of 3.5 – 4.9 is desirable as it indicates finer yet mature fibers that will be more versatile for spinning. Tamcot 22 micronaire value was outside the base range in only two of the 24 trials; vis. readings of 3.2 at Corpus Christi in 2000 (test average of 3.7) and 3.3 at Uvalde in 2000 (test average of 3.3).

We

Table 5. Average lint yield of Tamcot 96WD-22, Sure-Grow 125 and Tamcot Sphinx, 1998-2001.

Cultivar	Weslaco	Corpus Christi	College Station	Thrall	Uvalde	Weighted Average
Tamcot 22	**1357 a**	**907 a**	**699 a**	**461 a**	**951 a**	**948**
Sure-Grow 125	1216 ab	646 b	715 a	367 a	920 a	818
Tamcot Sphinx	1097 b	646 b	737 a	367 a	899 a	784

Values within columns followed by the same letter are not different at approximately p=0.05(k=100).

Weslaco (W), College Station (CS), and Uvalde (U) are irrigated sites while Corpus and Thrall are dryland.

W, CC = 4 yr

CS, T, U = 2 yr

Table 6. Lint yield, gin turnout and fiber quality traits for Tamcot 22 compared with Sure-Grow 125 and Tamcot Sphinx averaged over 2000 and 2001 at Weslaco, Corpus Christi, Uvalde, College Station, Thrall, Dallas and Chillicothe.

Cultivar	Lint yield	Gin Turnout	Micro naire	Length	Strength	Unifor mity	Elon-Gation
	(lb/a)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)
Tamcot 22	**851a**	**38.2a**	**4.0b**	**1.11a**	**27.0b**	**81.7b**	**6.0a**
Sure-Grow 125	708b	36.6a	4.6a	1.08b	28.8a	83.1a	5.4b
Tamcot Sphinx	682b	35.7a	4.5a	1.10ab	26.3b	83.3a	6.2a
%CV	16.6	36.8	9.3	2.1	7.0	1.3	6.4
Mean	747		4.4	1.09	27.4	82.7	5.9

Table 7. Lint yield, gin turnout and fiber quality traits for Tamcot 22 compared with FiberMax 832 and Tamcot Sphinx averaged over 2001 and 2002 Weslaco, Corpus Christi, Uvalde, College Station, Thrall, Dallas and Chillicothe performance trials.

Cultivar	Lint yield	Gin Turnout	Micro naire	Length	Strength	Unifor mity	Elon-Gation
	(lb/a)	(%)	(units)	(in)	(g/tex)	(ratio)	(%)
Tamcot 22	**900a**	**40.0a**	**4.2b**	**1.10b**	**27.1c**	**81.8b**	**5.7a**
FiberMax 832	771b	37.4b	4.4b	1.17a	33.0a	83.8a	4.5b
Tamcot Sphinx	683b	37.1b	4.8a	1.08b	29.0b	83.5a	5.4a
%CV	18.5	8.6	6.0	2.7	4.5	0.9	6.2
Mean	790	38.2	4.5	1.11	29.7	83.1	5.2

Table 8. Lint yield, gin turnout and fiber quality traits for 96WD-69s, 96WD-18 and 96 WD-22 with comparison checks in 2001 Preliminary Variety Test.

Weslaco

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Paymaster H1560	1361	39.2	4.8	1.10	28.6	84.0	6.7
Stoneville 474	1332	39.9	4.9	1.08	28.1	84.0	6.3
Tamcot 22	**1325**	**40.0**	**4.2**	**1.10**	**28.1**	**82.0**	**6.3**
NuCOTN 33B	1320	37.0	4.5	1.11	30.0	84.0	6.5
Sure-Grow 125	1290	38.2	5.0	1.09	25.4	84.0	6.9
Tamcot Pyramid	1240	39.3	4.5	1.05	28.3	83.0	6.7
96 WD-69s	1219	36.2	4.6	1.09	29.5	83.0	6.8
96 WD-18	1157	36.7	4.1	1.19	31.7	84.0	6.5
FiberMax FM 832	1049	37.4	4.2	1.20	35.3	85.0	6.2
Tamcot Sphinx	932	37.5	4.7	1.07	30.9	84.0	6.1
All-Tex Atlas	866	35.6	4.7	1.06	29.7	83.0	6.8
LSD (k=100)[1]	239	0.9	0.2	0.02	1.8	1.0	ns
% CV	10.7	1.3	2.7	1.10	3.1	0.6	4.3
Mean	1185	37.6	4.4	1.11	29.9	83.0	6.4

Corpus Christi

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**868**	**42.9**	**4.3**	**1.06**	**27.2**	**83.0**	**6.8**
96 WD-69s	776	38.0	4.6	1.05	28.3	83.0	7.5
FiberMax FM 832	768	40.9	4.7	1.11	30.8	84.0	6.4
96 WD-18	763	40.7	4.5	1.11	30.4	84.0	6.8
Stoneville 474	742	44.2	5.3	1.01	25.1	83.0	6.6
All-Tex Atlas	712	38.7	5.0	0.99	28.0	81.0	6.6
Paymaster H1560	683	42.3	5.5	1.04	25.4	82.0	6.9
NuCOTN 33B	628	39.3	5.0	1.03	24.8	83.0	7.5
Sure-Grow 125	605	39.4	4.7	1.06	26.3	84.0	6.9
Tamcot Pyramid	588	41.7	5.1	0.99	25.0	82.0	6.1
Tamcot Sphinx	555	39.3	5.2	1.02	28.0	83.0	6.3
LSD (k=100)[1]	ns	1.9	0.4	0.06	3.0	2.5	0.3
% CV	15.3	2.3	4.4	2.60	5.0	1.1	2.7
Mean	671	40.4	4.7	1.04	27.4	83.0	6.5

Table 8 con't. 2001 Preliminary Variety Test

San Patricio County

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
NuCOTN 33B	639	37.6	4.1	1.04	27.2	82.0	6.5
Stoneville 474	617	42.3	4.2	1.03	28.5	82.0	6.5
Tamcot 22	**576**	**40.0**	**3.5**	**1.06**	**30.2**	**82.0**	**6.7**
Paymaster H1560	494	39.5	4.3	1.01	28.2	83.0	6.3
Tamcot Pyramid	491	38.4	3.5	0.98	26.8	82.0	5.8
FiberMax FM 832	472	39.0	3.3	1.07	31.9	83.0	5.7
96 WD-18	420	38.0	3.5	1.10	34.3	83.0	6.4
All-Tex Atlas	418	36.3	3.6	1.00	33.8	82.0	6.4
Sure-Grow 125	411	40.3	4.2	1.04	27.4	83.0	6.8
Tamcot Sphinx	386	36.4	3.7	1.04	31.6	83.0	6.1
96 WD-69s	381	36.2	4.0	1.03	30.8	81.0	6.5
LSD (k=100)[1]	118	1.3	0.4	0.04	3.1	1.3	0.6
% CV	15.9	1.7	5.1	1.80	4.9	0.7	4.3
Mean	436	38.1	3.7	1.05	30.4	82.0	6.2

Upper Coast

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
96 WD-22	**1313**	**40.1**	**3.9**	**1.16**	**29.2**	**83**	**6.3**
FM 832	1205	38.2	4.1	1.21	34.7	85	6.1
Paymaster H1560	1174	38.6	4.3	1.12	29.1	84	6.9
96 WD-18	1161	36.9	4.1	1.21	31.2	84	6.7
96 WD-69s	1145	35.2	4.2	1.11	28.8	83	6.6
Stoneville 474	1137	38.5	4.6	1.06	28.7	83	6.7
96 WD-81	1101	36.7	4.1	1.11	28.8	83	6.4
NuCOTN 33B	1075	34.2	4.6	1.10	26.8	82	6.8
Tamcot Sphinx	1062	36.8	4.7	1.11	29.5	84	6.3
Tamcot Pyramid	1056	38.7	4.2	1.06	27.2	83	6.4
All-Tex Atlas	1038	35.7	4.5	1.10	28.6	84	6.7
Sure-Grow 125	917	36.6	4.6	1.12	28	85	6.5
LSD (k=100)1	269.0	0.9	0.4	0.04	2.7	1.6	ns
%CV	11.0	1.3	5	1.6	4.1	0.8	1.6
Mean	1133.0	37.1	4.2	1.14	29.9	83	6.4

Table 8 con't. 2001 Preliminary Variety Test

Uvalde

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**1313**	**40.1**	**3.9**	**1.16**	**29.2**	**83.0**	**6.3**
FiberMax FM 832	1205	38.2	4.1	1.21	34.7	85.0	6.1
Paymaster H1560	1174	38.6	4.3	1.12	29.1	84.0	6.9
96 WD-18	1161	36.9	4.1	1.21	31.2	84.0	6.7
96 WD-69s	1145	35.2	4.2	1.11	28.8	83.0	6.6
Stoneville 474	1137	38.5	4.6	1.06	28.7	83.0	6.7
NuCOTN 33B	1075	34.2	4.6	1.10	26.8	82.0	6.8
Tamcot Sphinx	1062	36.8	4.7	1.11	29.5	84.0	6.3
Tamcot Pyramid	1056	38.7	4.2	1.06	27.2	83.0	6.4
All-Tex Atlas	1038	35.7	4.5	1.10	28.6	84.0	6.7
Sure-Grow 125	917	36.6	4.6	1.12	28.0	85.0	6.5
LSD (k=100)[1]	170	1.5	0.2	0.03	2.0	1.4	0.3
% CV	7.5	1.9	3.2	1.40	3.3	0.8	2.5
Mean	1012	38.1	3.9	1.10	29.1	83.0	6.4

College Station

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot Pyramid	927	41.8	5.0	1.06	25.7	81.0	5.6
96 WD-69s	810	38.5	4.5	1.08	25.9	80.0	6.9
Paymaster H1560	775	41.3	4.9	1.06	27.1	82.0	6.2
Tamcot 22	**762**	**42.7**	**4.2**	**1.11**	**24.5**	**80.0**	**6.2**
Tamcot Sphinx	761	39.8	4.9	1.10	28.8	83.0	5.1
Sure-Grow 125	749	42.1	4.8	1.09	24.2	82.0	6.9
96 WD-18	693	38.7	4.2	1.16	28.6	81.0	5.4
Stoneville 474	689	42.8	4.6	1.06	25.2	80.0	6.5
FiberMax FM 832	676	39.6	4.4	1.19	30.5	82.0	4.3
NuCOTN 33B	668	37.7	4.5	1.08	26.1	81.0	6.1
All-Tex Atlas	641	40.0	5.0	1.05	26.6	81.0	6.4
LSD (k=100)[1]	137	1.5	0.3	0.04	1.8	ns	0.7
% CV	10.7	1.8	3.3	1.60	3.3	1.3	6.2
Mean	758	40.2	4.5	1.10	26.4	81.0	5.8

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Table 8 con't. 2001 Preliminary Variety Test

Thrall

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**518**	**44.5**	**4.9**	**1.07**	**28.8**	**81.0**	**6.4**
96 WD-69s	476	39.7	4.9	1.06	29.4	81.0	6.9
FiberMax FM 832	441	40.6	5.2	1.15	34.1	83.0	4.5
Paymaster H1560	412	42.4	5.5	1.06	30.6	84.0	6.0
Stoneville 474	395	43.0	5.4	1.06	28.9	83.0	5.8
NuCOTN 33B	342	38.6	5.2	1.09	28.6	83.0	6.2
Sure-Grow 125	340	42.5	5.2	1.07	28.7	83.0	6.5
All-Tex Atlas	332	39.3	4.8	1.04	31.4	83.0	6.2
Tamcot Sphinx	322	41.4	5.4	1.03	29.6	82.0	5.5
Tamcot Pyramid	312	42.2	4.8	0.98	25.4	82.0	6.6
96 WD-18	262	40.2	4.7	1.15	33.5	83.0	5.9
LSD (k=100)[1]	ns	2.5	0.3	0.04	3.2	1.5	0.8
% CV	26.4	2.7	3.2	2.00	4.8	0.8	6.1
Mean	368	41.1	4.9	1.07	29.9	82.0	5.9

Dallas

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**681**	**34.2**	**4.6**	**1.06**	**28.5**	**82.0**	**5.9**
Stoneville 474	579	34.1	6.2	1.06	29.1	84.0	5.2
Sure-Grow 125	541	32.2	5.7	1.08	28.4	84.0	6.0
NuCOTN 33B	526	30.6	5.7	1.05	28.1	82.0	5.0
Paymaster H1560	501	32.6	5.9	1.04	31.0	83.0	5.3
96 WD-18	495	30.6	5.0	1.14	33.1	83.0	5.4
96 WD-69s	487	30.9	5.1	1.00	29.5	81.0	6.3
FiberMax FM 832	471	29.4	5.3	1.15	34.6	83.0	4.1
All-Tex Atlas	443	30.8	5.2	1.01	31.2	83.0	5.6
Tamcot Sphinx	430	31.7	5.4	1.03	31.7	82.0	4.1
Tamcot Pyramid	402	32.1	5.1	0.96	25.9	80.0	5.8
LSD (k=100)[1]	76	1.4	0.3	0.04	1.7	ns	0.7
% CV	9.1	2.2	2.9	2.10	2.9	1.3	6.8
Mean	511	31.5	5.2	1.06	30.0	82.0	5.1

Table 8 con't. 2001 Preliminary Variety Test
Chillicothe

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot Pyramid	880	30.0	5.20	1.05	28.2	83.0	5.3
96 WD-69s	870	27.9	4.70	1.09	29.9	82.0	6.1
Tamcot 22	**847**	**31.1**	**4.60**	**1.15**	**28.8**	**82.0**	**5.4**
Tamcot Sphinx	842	28.6	5.00	1.10	32.6	83.0	4.3
Stoneville 474	832	31.4	5.40	1.13	29.7	83.0	4.9
NuCOTN 33B	826	26.9	5.1	1.14	28.4	82.00	5.3
Paymaster H1560	793	29.5	5.70	1.11	31.0	84.0	5.0
FiberMax FM 832	791	27.8	4.70	1.20	33.4	84.0	4.3
96 WD-18	765	27.8	4.50	1.18	32.7	84.0	5.3
All-Tex Atlas	761	27.0	4.90	1.10	31.5	83.0	5.6
Sure-Grow 125	716	30.2	4.90	1.14	28.3	83.0	6.0
LSD (k=100)[1]	76	1.4	0.3	0.04	1.7	ns	0.7
% CV	9.1	2.2	2.9	2.10	2.9	1.3	6.8
Mean	511	31.5	5.2	1.06	30.0	82.0	5.1

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Table 9. Lint yield, gin turnout and fiber quality traits for 96WD-69s, 96WD-18 and 96 WD-22 with comparison checks in 2002 Preliminary Variety Test.

Weslaco

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**898**	**41.3**	**4.5**	**1.08**	**27.4**	**82.0**	**5.2**
FiberMax FM 832	699	39.1	4.3	1.14	30.8	84.0	4.0
Stoneville 474	669	39.6	5.1	1.06	29.1	84.0	4.8
96 WD-69s	642	36.9	4.3	1.09	29.8	82.0	5.8
96 WD-18	588	38.0	4.4	1.16	32.8	85.0	4.8
Tamcot Pyramid	498	39.1	4.5	1.04	28.2	83.0	4.7
All-Tex Atlas	.	36.6	4.8	1.02	31.2	84.0	5.7
Tamcot Sphinx	.	37.0	4.7	1.03	29.9	84.0	4.2
LSD (k=100)[1]	189	Ns	0.3	0.03	2.2	ns	0.5
% CV	18.1	11.2	3.1	1.50	3.2	0.9	4.8
Mean	657	38.4	4.5	1.07	29.4	83.0	4.9

Corpus Christi

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Unifor-mity	Elonga-tion
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**887**	**40.8**	**4.0**	**1.13**	**28.7**	**84.0**	**5.6**
Tamcot Pyramid	736	37.7	4.9	1.05	29.0	83.0	5.0
FiberMax FM 832	686	37.1	4.3	1.21	35.7	86.0	3.8
Stoneville 474	666	39.5	5.0	1.07	29.7	84.0	5.1
96 WD-69s	627	34.9	4.6	1.10	32.9	84.0	6.3
96 WD-18	604	35.6	4.6	1.18	33.6	85.0	5.3
Tamcot Sphinx	575	36.3	5.1	1.08	31.2	84.0	4.3
All-Tex Atlas	488	36.0	4.6	1.08	34.3	84.0	5.7
LSD (k=100)[1]	253	1.5	0.2	0.04	1.4	1.9	0.6
% CV	12.3	1.8	2.3	1.60	2.0	0.9	5.8
Mean	682	37.2	4.5	1.11	31.6	84.0	5.1

Table 9 con't .2002 Preliminary Variety Test

Uvalde

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
96 WD-69s	1399	38.3	4.4	1.07	28.6	82.0	6.3
~~**Tamcot 22**~~	~~**1383**~~	~~**41.1**~~	~~**4.0**~~	~~**1.13**~~	~~**27.3**~~	~~**83.0**~~	~~**5.7**~~
FiberMax FM 832	1174	39.4	4.4	1.20	33.1	85.0	4.3
Stoneville 474	1094	42.2	4.6	1.10	29.1	84.0	5.3
96 WD-18	1068	38.3	4.2	1.20	29.7	86.0	6.0
Tamcot Sphinx	837	39.2	4.7	1.08	31.3	83.0	4.9
Tamcot Pyramid	822	40.2	4.4	1.05	29.1	83.0	5.6
All-Tex Atlas	790	37.8	4.4	1.06	30.7	84.0	6.3
LSD (k=100)[1]	105	1.9	ns	0.04	3.0	1.8	0.8
% CV	6.9	2.0	3.7	1.70	4.0	0.9	6.4
Mean	1096	39.5	4.4	1.11	29.6	83.0	5.5

College Station

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Stoneville 474	853	34.4	5.0	1.05	26.6	82.0	4.7
96 WD-69s	748	31.6	4.3	1.08	25.0	82.0	5.8
Tamcot 22	**741**	**34.2**	**4.0**	**1.09**	**23.5**	**80.0**	**5.0**
FiberMax FM 832	706	32.9	3.9	1.18	29.7	82.0	3.8
Tamcot Pyramid	705	33.5	4.3	1.07	25.6	82.0	4.8
96 WD-18	612	31.0	4.1	1.14	27.5	83.0	4.8
Tamcot Sphinx	580	30.9	4.5	1.06	29.1	83.0	4.6
All-Tex Atlas	462	30.6	4.3	1.04	26.6	81.0	5.0
LSD (k=100)[1]	113	1.1	0.3	0.06	2.1	1.7	0.6
% CV	11.8	1.5	3.4	2.20	3.4	0.8	5.2
Mean	655	32.2	4.3	1.08	26.3	82.0	4.8

Dallas

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Tamcot 22	**986**	**44.1**	**4.1**	**1.04**	**28.2**	**81.0**	**4.9**
96 WD-69s	912	38.7	4.5	1.02	32.3	82.0	5.5
96 WD-69s	912	38.7	4.5	1.02	32.3	82.0	5.5
FiberMax FM 832	831	40.8	4.3	1.13	36.5	83.0	3.6
Tamcot Pyramid	811	40.7	4.4	1.00	29.4	83.0	4.8
Stoneville 474	803	43.8	4.7	1.05	30.7	83.0	4.8
All-Tex Atlas	.	38.4	4.0	1.00	32.5	83.0	5.3
Tamcot Sphinx	.	39.8	4.3	1.03	32.8	83.0	4.2
LSD (k=100)[1]	103	2.1	ns	0.09	4.4	ns	0.4
% CV	8.2	2.2	6.4	3.30	5.4	1.5	4.2
Mean	834	40.6	4.2	1.04	31.6	82.0	4.7

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Table 9 con't . 2002 Preliminary Variety Test

Thrall

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Stoneville 474	620	39.6	4.4	1.09	28.9	83.0	4.6
FiberMax FM 832	607	38.4	4.7	1.15	33.0	85.0	3.7
Tamcot 22	**589**	**39.9**	**4.4**	**1.14**	**26.9**	**83.0**	**4.8**
96 WD-18	580	36.3	4.1	1.19	31.9	85.0	5.0
96 WD-69s	543	36.7	4.4	1.09	29.2	83.0	5.4
Tamcot Sphinx	501	37.6	4.6	1.14	32.2	84.0	3.9
Tamcot Pyramid	492	39.1	4.7	1.08	28.5	83.0	4.7
All-Tex Atlas	346	35.3	4.4	1.08	29.5	83.0	5.0
LSD (k=100)[1]	96	1.7	ns	0.08	2.4	ns	0.8
% CV	12.8	1.9	3.8	2.80	3.3	1.0	7.0
Mean	525	37.7	4.4	1.11	29.9	84.0	4.6

Chillicothe

Cultivar	Lint Yield	Gin Turnout	Micro-naire	Length	Strength	Uniformity	Elongation
	(lb/a	(%)	(units)	(in)	(g/tex)	ration	(%)
Stoneville 474	853	34.4	5.0	1.05	26.6	82.0	4.7
96 WD-69s	748	31.6	4.3	1.08	25.0	82.0	5.8
Tamcot 22	741	34.2	4.0	1.09	23.5	80.0	5.0
FiberMax FM 832	706	32.9	3.9	1.18	29.7	82.0	3.8
Tamcot Pyramid	705	33.5	4.3	1.07	25.6	82.0	4.8
96 WD-18	612	31.0	4.1	1.14	27.5	83.0	4.8
Tamcot Sphinx	580	30.9	4.5	1.06	29.1	83.0	4.6
All-Tex Atlas	462	30.6	4.3	1.04	26.6	81.0	5.0
LSD (k=100)[1]	148	ns	ns	0.08	1.9	1.0	0.5
% CV	8.1	5.3	6.3	2.60	2.6	0.5	3.9
Mean	1239	26.5	3.9	1.14	31.1	83.0	5.4

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Texas Agricultural Experiment Station	TAM 96 WD-22	Tamcot 22
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
Office of the Director, TAES 2147 TAMU College Station, TX 77843-2147	(979) 845-4747	(979) 458-4765
	7. PVPO NUMBER 200500006	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** ☑ **YES** ☐ **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** ☑ **YES** ☐ **NO**

10. Is the applicant the original owner? ☑ **YES** ☐ **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
☐ **YES** ☐ **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
☐ **YES** ☐ **NO** **If no, give name of country**

11. Additional explanation on ownership *(Trace ownership from original breeder to current owner. Use the reverse for extra space if needed)*:

TAES policy and handbook manual provide that all germplasm and varieties developed by its employees in the course of their duties are owned by TAES. A copy of this policy is provided for your records.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provide and employer.

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TEXAS AGRICULTURAL EXPERIMENT STATION
HANDBOOK

NUMBER 1250B
PAGE 1 OF 8
ISSUED: March 31, 1995

STANDARD PROCEDURE

MANAGEMENT AND RELEASE OF NEW PLANT MATERIALS

1.00 PURPOSE AND BACKGROUND

The purpose of this document is to outline guidelines for the management and transfer of plant materials developed by the Texas Agricultural Experiment Station (Experiment Station) recognizing diversity in agronomic, horticultural, and industrial plant programs. The terms "plant material" and "seed" are intended to be all-inclusive, including vegetatively propagated plant materials, such as sprigs, rhizomes, or buds.

The Experiment Station, as part of the Texas A&M University System (System), and in cooperation with the Texas Agricultural Extension Service (Extension), conducts research in crop breeding and genetic improvement to benefit the public and support the educational mission of Texas A&M University (TAMU), including the development and release of improved germplasm and new crop cultivars.

The Experiment Station, part of the public agricultural research system, has a broad mission to serve agriculture, particularly farmers and the general public. Farm, commodity, and trade organizations are encouraged to provide suggestions to enhance crop improvement and the distribution of new plant materials. Plant materials are considered as intellectual property and are owned and managed by the Experiment Station, under System policies.

Three basic goals are summarized in Section 2.00 to guide release decisions. General guidelines and methods are outlined in Section 3.00 for transferring plant material for private and commercial uses. The classification of plant materials and types of releases is intended to assist both the breeder and seed users in understanding some alternatives in managing releases. Partnerships, joint incentives, and sharing of research materials are encouraged.

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APPROVAL:
Edward A. Hiler
EDWARD A. HILER

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2.00 GOALS IN PLANT MANAGEMENT AND RELEASE

Three general goals provide the basic criteria for the management of plant materials and release decisions. These goals include:

A. Maximize Public Benefit. Plant material must be utilized by farmers and consumers to benefit the public. Plant material must be increased and managed to retain genetic purity. Variety or designated names provide identity and recognition to the originator of the improved plant materials. Commercial production and the distribution of plant releases are essential for both large and small acreage crops. Protection agreements and licensing provisions are frequently necessary to complete research and assure transfer of materials to the private sector.

B. Assure Technology Transfer to the Private Sector. The Experiment Station serves as a primary producer and distributor of new plant materials and depends upon the private sector to increase and market seed. State and federal plant protection provisions, protected names, trademarks, and/or markers (such as biochemical identification) may be useful in transferring technology to the private sector.

C. Recover Costs and Generate Revenue. The generation of funds through seed sales, fees, and other business terms is essential to recover some development costs and protection expenses, maintain competitive science, and enhance future crop improvement research. Financial terms and license provisions on plant materials must be realistic and consistent with the biological potentials and business environment.

3.00 GENERAL GUIDELINES AND KEY PARTICIPANTS

A. General Guidelines are outlined below for the orderly equitable release, distribution, and protection of plant materials.

Partnerships and Cooperation. The Experiment Station is responsible for research in crop breeding and genetic enhancement and assuring the timely transfer of this work to agricultural, scientific and industrial communities. Cooperation among the faculty and between faculty and external scientific and industrial interests is essential. Private interests are increasingly providing resources for research, in return for some preferential access to plant products and new technology. The commercialization of research had been encouraged both by Legislative mandates to the Experiment Station and through actions by the Board of Regents to provide financial incentives to faculty and staff to develop products or services of commercial usefulness.

Plant Release Proposals - Early discussion with Texas Foundation Seed Service (TFSS), the Plant Review Committee (PRC), and the System Technology Licensing Office (TLO) is encouraged in planning a new release. The breeder generally assumes a lead responsibility for preparing and submitting the Release Proposal (outlined in Section 5.00). Plant material is considered to be owned and under the stewardship of the Experiment Station. If a decision is made to not release particular plant materials, then the disposition and use of that material remains the discretion of the Experiment Station.

Exchange and Distribution. Exchange of plant material for breeding and genetic research is encouraged for public institutions and private industry and may include regional testing, Extension trials, and cooperative evaluations. "Selected Plant Materials" (see Section 4.00) may be provided to private firms, public breeders, grown on private lands, or placed with a private producer for further commercial evaluation before it is formally released.

Transfer and Protection - The formal release and transfer of new plant materials will usually involve public notices of availability and may involve Requests for Proposals or expressions of interest from private firms and/or the transfer of intellectual property rights through the use of licenses and agreements. The Experiment Station, in conjunction with the Breeder and the TLO, will consider applications for the appropriate intellectual property protection such as Certificates of Plant Variety Protection, Plant Patents, or Utility Patents in facilitating the transfer and protection of new plant materials. Additionally, in some instances individual firms and/or industrial groups may enter into research or partnership agreements on intellectual property, to gain access to genetic products.

Distribution of any plant material should be documented to avoid premature release, unauthorized distribution, misunderstandings over ownership, or loss of intellectual property rights. Protection agreements during research help assure that private firms can acquire rights and marketing opportunities later and/or protect their investment in marketing new products. Material Transfer Agreements (MTAs) are to be used in providing material to private firms and public agencies for evaluation (with copies filed with Texas Foundation Seed Service and the Technology Licensing Office).

B. Roles of Key Participants

Scientific quality, summary of research, review of proposals, and technology transfer involve several individuals and groups working together. Successful plant release includes institutional flexibility to meet the needs of each crop or release. Roles of primary participants are outlined as follows:

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Plant Breeders and other scientists provide the major leadership in research and the release of plant materials. Responsibilities include research planning, periodic reviews on future releases, assuring materials are adequately protected, preparation of release proposals, and suggesting ways to implement release. A team is frequently involved with a release and may involve several disciplines and recognition of co-worker contributions.

Cooperative evaluations are encouraged, particularly with Extension Specialists. The Plant Review Committee commonly looks for Extension participation on new variety releases. Breeders maintain Breeder Seed and may provide technical or advisory assistance to TFSS, TLO or commercial firms.

Department Heads and Resident Directors provide a key role in crop improvement programs by guiding coordination between disciplines, and helping assure the TFSS, TLO and others are aware of potential releases. These Administrative Heads provide a vital linkage in planning, implementation and guidance for the total crop improvement program.

Program Coordinators provide communication among the developers of plant materials, the seed industry, and crop producers on scientific progress and the transfer of new materials into crop productions. The Head of the Department of Soil and Crop Sciences and Resident Director of Research at the Texas A&M Agricultural Research and Extension Center at Beaumont serve as Program Coordinators for all field crops and turfgrass, while the Head of the Department of Horticultural Sciences serves as the Program Coordinator for fruit, vegetable, and nut crops, including emphasis on industry relationships. Activities of Program Coordinators include:

1. Effective communication among breeders, department heads, resident directors, and with industry and producer interests;
2. Development of new partnerships between the Experiment Station and industry/producer interests, plus industry relationships and liaison with industry associations;
3. Advising the Director on release and licensing issues, and interacting with the Technology Licensing Office as appropriate. The Coordinators will report to the Director of the Experiment Station in these roles.

The Texas Foundation Seed Service, located at Vernon, will be responsible for the production of foundation seed and assisting breeders in the production of breeder's seed, as requested, and/or where required by a contract or license agreement managed by the TLO. The operation is expected to be largely self-sufficient.

TFSS works with TLO, other Foundation Seed organizations, Crop Improvement Associations in other states, the Texas Department of Agriculture, USDA, and other state and federal agencies. When plant materials are licensed or managed under an agreement, TFSS works closely with the TLO.

TFSS works with a lead Extension Specialist to coordinate seed for county and regional field tests, manages the increase and distribution of foundation seed stock and handles revenues from seed sales and nonlicensed products.

The Plant Review Committee (PRC) is a standing internal committee appointed by the Director of the Experiment Station to oversee the orderly release of plant materials, provide guidance to TFSS and TLO, and to make recommendations to the Director of the Experiment Station on plant materials. Activities of the PRC include:

1. Establish technical review panels to evaluate release proposals.
2. Hold quarterly meetings to review release proposals and meet with breeders who are planning releases, and act on release proposals.
3. Provide recommendations to the TFSS, TLO and Director's Office on release proposals, cultivar names, and agreements on licensing and advise the Director of the Experiment Station on release and licensing issues. If a question arises between faculty on "proportional creativity" or royalty sharing, the PRC may make recommendations to the Experiment Station Director.

The Technology Licensing Office is involved in initial discussions and planning with breeders, unit heads, Program Coordinators, and TFSS on planned releases suitable for licensing. In conjunction with the Program Coordinators and breeders, the TLO provides leadership and initiative for the protection and management of intellectual property for new releases including the following services:

1. Management of license and royalty agreements;
2. Marketing of new selected plant materials to commercial firms;
3. Development and negotiation of license and evaluation agreements;
4. Management of intellectual property protection;
5. Advice on business strategies and intellectual property protection issues; and
6. Advises and keeps the Assistant Vice Chancellor for Administration (Agriculture) who represents the Experiment Station apprised of all services provided by the TLO in the management of new plant materials.

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4.00 TYPES OF RELEASES AND PROTECTION

A. Classes of Material - Improved plant materials may result from genetic manipulation by plant breeding and/or molecular and cellular biology. For purposes of management and release, plant materials are classified as follows:

1. Genetic Stocks: Research in plant breeding, genetic and/or cellular and molecular biology may produce unique genetic characteristics or distinct genetic materials useful to other researchers. Examples include specific genetic characters, genes or gene constructs involving vectors, and promoters. An essential characteristic of genetic stocks is that they have no immediate commercial value.

2. Germplasm: Germplasm is commonly used to further research, with little value for increase or direct commercial use in its present form. However, some desirable characters may be immediately useful to breeders and industry in developing improved varieties in other research programs.

3. Breeding Lines: Breeding lines may contain useful characteristics of unique traits with apparent commercial value. Breeding lines may be increased in their present form, used for selection, or tested further before commercialization. The Experiment Station may choose to release some advanced materials as "breeding lines" rather than continue research for commercial applications as varieties or inbred lines.

4. Selected Plant Material: Selected plant materials may be transferred to public or private firms for cooperative research, usually under a protection agreement, for further development, feasibility studies, or commercial exploration.

5. Commercial Varieties or Parental/Inbred Line: These plant materials are released for direct commercialization as new varieties or production of hybrids; release depends on clear demonstration of performance or traits in several experiments over several years, locations and/or conditions.

B. Types of Releases and Transfer

Release of plant materials is based on several factors (such as crop species, means of propagation, and commercial potential). Flexibility is essential to meet specific economic, biological or industry needs. Alternatives for release and distribution of plant materials include:

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1. Unrestricted Unlimited Release - An Unrestricted Unlimited Release is intended for general uses of those plant materials with undefined uses or low commercial potential, without any restrictions on research or commercialization uses. One-time fees may be requested to recover costs.

2. Restricted Release - A Restricted Release designates specific uses for plant material, with an agreement with recipients, noting restrictions, applications, and mutual interests.

3. Limited Release - A Limited Release involves specific recipients, to enable selected firms to use plant materials. Agreements may be developed with a small number of firm(s), firms selected on the basis of their proposal, and/or provide a protected position for a single firm or organization to complete research and/or assume commercial development. Limited Releases are usually managed under a license or option agreement, with financial terms and performance expectations.

4. Unreleased Transfer - Some plant materials may not be immediately released but simply provided to others for additional research or commercial feasibility studies. "Selected Plant Materials" may be managed under a Material Transfer Agreement or an Option Agreement, until specific traits and usefulness are determined and a formal release is proposed.

C. Pre-release Protection is essential to clarify ownership and transfer uses and rights to others later. Material Transfer Agreements (MTAs) and other sample documents are available from TLO. A copy of all pre-release documentation (MTA's and other documents) should be provided by the breeders to the Technology Licensing Office, Foundation Seed Service and Program Coordinators.

Exchange of plant materials for research uses with other public breeders may be handled directly by the breeders, through an MTA with the (1) identification and quantity of materials being provided to a co-worker, (2) clarifying the anticipated uses for breeding and research purposes, (3) stating that the Experiment Station retains its ownership, and (4) obtaining written acknowledgment from the recipient.

Field testing and commercial scale evaluations are encouraged, involving other breeders, Extension Specialists, farmers or others. Most commonly seed for one season is provided for field trials and is not to be retained or transferred to others. An MTA should be completed with farms or cooperators to clarify expectations.

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5.00 THE RELEASE PROPOSAL AND PROCESS

A. Release proposals are prepared by the breeders and summarize the background, current facts, and plant performance/traits. The release proposal may vary in detail, depending on the class of plant material (please see Section 4), however all release proposals should include these sections:

1. Background - information on the source, origin, or breeding history.
2. Performance and Traits - summary of key features, data, anticipated usefulness, and/or disclosure limitations or unknown features. This section may be brief for germplasm and more detailed for a variety (including details on yields, statistics, quality, host plant resistance, and regions of adaptation).
3. Seed production and availability - type and quantity of seed availability for increase or distribution.
4. Implementation - breeder's suggestion on notifications, release and distribution, and guidance for outreach (including protection as appropriate) and revenue sharing (for royalties, if others were involved in the creative development).

The Release Proposal should be prepared for internal review with sufficient data and information for a peer group to evaluate merits and make decisions. Alternatively, the Release Proposal may be prepared (or later converted) as a Station publication, to document research and provide technical information for others.

B. Registration Article (for submission to a professional journal) should be with the proposal for a new variety or germplasm release. Include a draft of the Experiment Station Leaflet for new varieties. The original and 15 copies of the entire package Release proposal, Registration Article, and Leaflet (as appropriate) should be submitted through the administrative head and Program Coordinator to the PRC (with one copy to the Foundation Seed Office) eight weeks before the quarterly PRC meetings. Additional information on preparing and submitting releases is available from the PRC Chair.

C. Revenue Distribution

Royalties or income generated form the commercialization of plant materials will be distributed to the inventors on all types of plant material, according to the TAMU System policy on intellectual property (System Policy 17.02, Patents). Scientists involved in the development of plant materials that generate royalties or income under a license or option agreement must agree in advance regarding proportionate contributions and sharing of expected income prior to the distribution of such income.

(This revision replaces Standard Procedure 1250A, dated August 3, 1992)